Appl. No.: 10/067,255   Docket No. 110344.101 US2   **RECEIVED**
Reply to Office Action of April 11, 2006   **CENTRAL FAX CENTER**

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REMARKS

In the Office Action, the Examiner noted that claims 1-46 are pending in the application, and that claims 1-46 are rejected. By this amendment, claims 1-46 have been amended. Thus, claims 1-46 are pending in the application. The Examiner's rejections are traversed below.

I. Rejection of claims 1-46 under 35 U.S.C. § 101

The Examiner rejected claims 1-46 because none of the claims are limited to a practical application in the technological arts (Office Action dated 04/11/2006, page 2), and that applicant cites no specific results that define a useful, concrete and tangible result (Office Action, page 6). The Examiner further argues that "recital of the words 'aerial combat situation' is insufficient to properly limit the claims to a practical application" (Office Action, page 18).

The latest USPTO guidance on examination of applications for compliance with 35 U.S.C. § 101 is the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Interim Guidelines) published on November 22, 2005. Under these guidelines, an invention discloses statutory subject matter if it falls within an enumerated category and does not fall within a judicially created exception. If it does fall with a judicially created exception, a practical application (a useful, concrete, and tangible result) of such subject matter is patentable. Interim Guidelines § IV(C)(2)(b)

Independent claims 1 and 43 are directed to a process for using an intelligent agent system, which is a statutorily enumerated category. Further, claim 1 has been amended to recite "generating alternative actions to be selected by at least one user," and "implementing of the at least one of the alternative actions being used to direct the use of one or more of the resources involved in the aerial combat situation." This makes clear that claim 1 is directed to a process

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for using an intelligent agent in an aerial combat situation. This also makes clear that the claim recites a practical application because it affects resources involved in a combat situation. Further, claim 1 has been amended to clarify that the intelligent agent generates alternative actions that the user can select, and which can then be implemented either by the intelligent agent independently or with the assistance of the user. These arguments apply equally to claim 43's broader "situation."

Independent claim 44 is directed to the statutorily enumerated category of a machine. Additionally, claim 44 has been amended similarly to claim 1, therefore for at least the reasons given above with respect to claim 1, this claim also represents statutory subject matter.

Independent claims 45 and 46 are directed to the statutorily enumerated category of a manufacture. These independent claims recite a computer readable medium storing instructions. This type of "functional descriptive material" is statutory subject matter because it allows the process of using the agent to be realized in a tangible medium. See Interim Guidelines (ANNEX IV) ("When functional descriptive material is recorded on some computer-readable medium it . . . will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.") Additionally, these claims have been amended similarly to claim 1, therefore for at least the reasons given above with respect to claim 1, these claims also represent statutory subject matter.

Applicant respectfully requests the reversal of this rejection for independent claims 1 and 43 - 46, and corresponding dependent claims 2 - 42. Applicant also requests the reversal of the corresponding rejection under 35 U.S.C. § 112.

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II. Rejection of claims 1-46 under 35 U.S.C. § 112

The Examiner rejected claims 1-46 under 35 U.S.C. § 112, as a consequence of rejecting

claims 1-46 under 35 U.S.C. § 101. Applicant respectfully requests the Examiner to withdraw

the rejection under 35 U.S.C. § 112 in light of applicant's response to the rejection

under 35 U.S.C. § 101.

Further, claim 1 has been amended to recite "generating alternative actions to be selected

by at least one user," and to recite "configuring, using a computer, at least one tactical agent that

includes with data corresponding to an aerial combat environment and with the data

corresponding to resources involved in the at least one aerial combat situation, including first

data on the aerial combat environment and the resources involved in the at least one aerial

combat situation, second data on the near certain future status of the aerial combat environment

and the resources involved in the at least one aerial combat situation, and third data on the

possible future status of the aerial combat environment and the resources involved in the at least

one aerial combat situation." This clarifies that claim 1 is directed to data about the aerial

combat situation. Claim 1 is therefore not indefinite, and would be understandable to one of

ordinary skill in the art. Independent claims 43-46 have been similarly amended.

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III. Rejection of claims 1, 3, 4, and 43-46 as anticipated by Wigren

The Examiner rejected claims 1, 3, 4, and 43-46 as anticipated under 35 U.S.C. § 102(a) by U.S. Patent No. 6,278,401 issued to Wigren (Wigren). Claim 1 is not anticipated by Wigren, because Wigren fails to teach either an intelligent agent, or "one tactical agent that includes data corresponding to . . . to resources involved in the at least one aerial combat situation, including first data on the aerial combat environment and the resources involved in the at least one aerial combat situation, second data on the near certain future status of the aerial combat environment and the resources involved in the at least one aerial combat situation, and third data on the possible future status of the aerial combat environment and the resources involved in the at least one aerial combat situation." Essentially, Wigren is directed towards a system for tracking targets and estimating a target type using data from various sensors. Wigren simply processes this sensor data like a sophisticated calculator, and consequently, is not the same as the "intelligent agent system" being claimed by Applicant. (Col. 2, lines 10-15).

First, Wigren fails to teach the element of an intelligent agent. Embodiments of the present invention are directed towards an intelligent agent, and as described in the specification, "Agents and humans collaborate because humans and agents jointly perform tasks" (Specification page 3, ¶ 1). The specification further describes that, "The described ATS provides a feedback loop between an intelligent agent and a user," and "Agents and users (humans or other agents) exchange information throughout ATS running" (Specification page 3, ¶ 3).

There are basically four levels for the interactivity of an application. Batch interactivity, such as, a printer processing various print jobs from a print queue. Configuration interactivity, where an application will have some upfront interaction for configuration, but once it begins running, there is no further interaction. Classic interactivity, where an application will run for a while, wait and probe for user input, the repeat the process of running and probing for input. Agent-interactive, not only is the program classic interactive, but it can probe for input while it is running.

Wigren teaches a system with only batch interactivity. The Examiner cited Wigren (Col. 24, lines 15-25), as teaching an interactive agent. This portion of Wigren only teaches that a user enters the data necessary to configure the system. The same need for configuration is also described at (Col. 5, lines 21-25) and (Col. 13, lines 52-55). Once the system is properly configured, it is able to use sensor measurements to calculate target type probabilities. See (Col. 5, lines 25-50). This type of configuration before operation is analogous to a batch processing system and is not, even under a broadest reasonable construction, what one of ordinary skill in the art would consider the term "intelligent agent" to mean. As described above, an intelligent agent provides a higher level of interactivity, where a program can run while it is collecting input. Agents can even provide information to a user. See specification page 3, ¶ 3 ("Agents and users . . . exchange information throughout ATS running.")

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Additionally, the intelligent agent of amended claim 1 generates "alternative actions to be selected by at least one user" and implementing these alternative actions either independently, or with the assistance of a user. Wigren is like a sophisticated calculator, capable of turning input data into estimates for target tracks and target types, but similar to the limited role of a calculator, it does not independently implement decision making, or assist a user in implementing decision making. For example, see the summary of the invention (Specification, page 2), "the agent is intelligent because it exhibits autonomous behavior." Therefore, Wigren fails to teach or suggest an intelligent agent, because it cannot independently, or assist a user, in implementing the alternative actions.

Second, Wigren fails to teach a "tactical agent that includes data corresponding to . . . resources involved in the at least one aerial combat situation." Wigren operates by mathematically processing current and past sensor measurements. See (Col. 2, lines 28-30) and (Col. 7, lines 33-38). These measurements are described in (Col. 7, lines 33-38), as "the last two measurements." Use of future, or longer-term possibilities, has no place in the estimation system of Wigren. Because Wigren uses prior measurements to estimate a target type, and not future possibilities, Wigren cannot not teach a system that "tactical agent that includes data corresponding to . . . resources involved in the at least one aerial combat situation." Accordingly, Applicant respectfully requests this rejection be reversed.

A.   Claim 4

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Claim 4 further recites that the intelligent agent is "configurable to perform independent decisions." The Examiner argued this feature is shown at (Col. 13, lines 65-67) which describes updating target type probabilities. As argued above with respect to claim 1, this does not teach an agent "configurable to perform independent decisions." Additionally, this claim is not anticipated for the reasons given above for claim 1.

B. Claim 12

Claim 12 recites "providing the at least one user advice on coordinating the at least one aerial combat situation using a closed loop feedback process between the at least one intelligent agent and the at least one user." As argued above, Wigren is no more than a sophisticated calculator and is not an intelligent agent as that term would be understood in light of specification by one of ordinary skill in the art. Wigren teaches a system with only batch interactivity. Claim 12 describes a system that is an intelligent agent, where as described by the specification, a user and an agent. "exchange information throughout ATS running." In this case the information exchange is done using a "closed loop feedback process." No such feedback process is present in Wigren.

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C.   Claims 43 – 45

Claims 43 - 46 all recite an intelligent agent and "one tactical agent that includes data corresponding to . . . resources involved in the at least one aerial combat situation" Therefore, claims 43 and 45 are not anticipated for at least the reasons given above for claim 1.

D.   Claim 46

Claim 66 recites an intelligent agent and "one tactical agent that includes data corresponding to . . . resources involved in the at least one aerial combat situation." Therefore, claim 46 is not anticipated for at least the reasons given above for claim 1.

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CONCLUSION

Applicant wishes to clarify for the record, if necessary, that the claims have been amended to expedite prosecution. Moreover, Applicant reserves the right to pursue the original subject matter recited in the present claims in a continuation application.

Any narrowing amendments made to the claims in the present Amendment are not to be construed as a surrender of any subject matter between the original claims and the present claims; rather merely Applicant's best attempt at providing one or more definitions of what the Applicant believes to be suitable patent protection. In addition, the present claims provide the intended scope of protection that Applicant is seeking for this application. Therefore, no estoppel should be presumed, and Applicant's claims are intended to include a scope of protection under the Doctrine of Equivalents.

Further, Applicant hereby retracts any arguments and/or statements made during prosecution that were rejected by the Examiner during prosecution and/or that were unnecessary to obtain allowance, and only maintains the arguments that persuaded the Examiner with respect to the allowability of the patent claims, as one of ordinary skill would understand from a review of the prosecution history. That is, Applicant specifically retracts statements that one of ordinary skill would recognize from reading the file history were not necessary, not used and/or were rejected by the Examiner in allowing the patent application.

For all the reasons advanced above, Applicant respectfully submits that the rejections have been overcome and should be withdrawn.

For all the reasons advanced above, Applicant respectfully submits that the Application is in condition for allowance, and that such action is earnestly solicited.

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AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees, which may be required for this Amendment, or credit any overpayment to Deposit Account No. 08-0219.

In the event that an Extension of Time is required in addition to that requested in the petition for an Extension of Time, the Commissioner is requested to grant a petition for that Extension of Time which is required to make this response timely and is hereby authorized to charge any fee for such an Extension of Time or credit any overpayment for an Extension of Time to Deposit Account No. 08-0219.

Respectfully submitted,

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